



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, Ca. 94105-3901

August 24, 1992

Mr. W. Don Maughan
Chairman
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812

Re: Closing Statement Submitted to the SWRCB Hearings on Interim Standards for
the Bay/Delta Estuary

Dear Mr. Maughan:

Thank you for the opportunity to provide this closing statement as part of the
State Board's hearings on interim standards for the Bay/Delta estuary.

BACKGROUND

As you know, on September 3, 1991, EPA disapproved the State's water
quality standards for the Bay/Delta estuary because the proposed standards failed to
include criteria sufficient to protect all of the designated uses of the estuary. Because
California failed to adopt approvable standards within 90 days following EPA's
disapproval, EPA is required under Section 303 of the Federal Clean Act to promptly
propose regulations setting forth Federal standards for the Bay/Delta estuary.

Accordingly, EPA has initiated its own rulemaking effort designed to develop
Federal standards to replace those disapproved in our action of September 3, 1991.
However, in keeping with the Clean Water Act's recognition that the states have
primary responsibility for setting and implementing water quality standards, we are
also continuing our discussions with the Board in the hopes that it will adopt standards
that meet the requirements of the Federal Clean Water Act. If it does so, EPA can
cease the Federal rulemaking effort and approve the new State standards.

Governor Wilson's water initiative last spring established several policies,
including a renewed commitment to the Three-Way Process of negotiations and the
adoption of interim measures to protect the Bay/Delta by the State Board before the
end of 1992. Governor Wilson also recognized the cooperative state/federal nature of
EPA's Clean Water Act review in his water policy announcement last April when he
"charg[ed] Cal EPA and the [Board] to continue to work closely with the federal EPA in
developing these interim water quality standards by year's end."

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As part of the continuing dialogue between EPA and the Board, EPA participated in the Interim Standards hearings by presenting a "Policy Statement" pursuant to the Board's hearing regulations. The written statement, dated June 11, 1992, was summarized by our oral testimony at the Board's hearing in Sacramento on June 22. EPA also worked closely with representatives of the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to prepare and submit an "Interagency Statement of Principles" for the Board's consideration (WRINT-USFWS-10). This Statement suggested some goals and approaches that the signatory agencies believe would lead to interim and long term solutions in the Bay/Delta and would serve as the basis for water quality standards that would meet the requirements of the Clean Water Act.

EPA staff also attended the Board's hearings in July and August, and have reviewed a substantial portion of the written testimony submitted to the Board.

Our purpose in submitting this closing statement is to continue this cooperative effort to develop standards that are approvable under the Clean Water Act. Our primary purpose is to describe three different water quality standards that we believe are necessary to protect the designated uses of the estuary, and that, if adopted by the State, would obviate the need for a Federal promulgation. Our descriptions of these standards are necessarily preliminary; we have not yet completely defined how these proposed standards would be stated or measured. Nevertheless, we believe that these proposed standards are consistent with the voluminous scientific evidence developed in the Interim Standards hearings and in the previous hearings and scientific literature on the biological resources in the Bay/Delta. We also believe that these proposed standards would be consistent with the requirements of Section 303 of the Clean Water Act and the underlying regulations at 40 CFR Part 131.

PROPOSED STANDARDS

In General

The three standards outlined below are designed to provide protection for the designated fish and wildlife uses of the Bay/Delta estuary. These standards are clearly at a preliminary stage. We would like to work with the Board to refine the standards, focusing especially on ways in which the intended biological benefits of these standards can be attained while retaining maximum operational flexibility and minimizing water costs.

I. Salinity Standard for Estuarine Habitat

The Standard

EPA recommends that the State adopt salinity standards of 2 ppt at Chipps Island and at Roe Island from February through June (each standard varying according to water-year hydrologic conditions).

Background

EPA's recommendation follows the approach suggested by the San Francisco Estuary Project (SFEP) technical workshop in that it proposes a salinity line (isohaline) as the standard best able to define an acceptable fisheries habitat. During the Board's Interim Standards hearings, the SFEP submitted the results of its technical workshops, which stated that "a consensus had been reached...that salinity is the best measure upon which to base an estuarine standard." (WRINT-SFEP-4 p.5) This conclusion was based, in part, on strong evidence that significant relationships exist between the location of the 2 ppt salinity line and biological populations at many trophic levels. (WRINT-SFEP-4,8) They also noted that "development of seasonal salinity standards would allow maximum flexibility to water managers who must balance a number of competing uses for an over-burdened water supply." (WRINT-SFEP-4)

EPA's placement of the salinity isohaline in Suisun Bay is based in large part on the evidence submitted to the Board by USFWS and Dr. Peter Moyle of U.C. Davis. It is also consistent with the interim goal recommended by USFWS, NMFS, and EPA in the Interagency Statement of Principles, and endorsed by Department of Fish and Game (DFG) (WRINT-DFG-8), of restoring habitat conditions to levels which existed during the late 1960's and early 1970's.

In its recent proposal to list the Delta smelt as a threatened species under the Federal Endangered Species Act (56 FR 50078), the USFWS designated as critical habitat for the smelt waters in Suisun Bay having salinities below 2 ppt from January through June. (WRINT-USFWS-13). In the subsequent State Board hearings, the Service further defined these habitat needs as "salinities below 2 ppt in estuarine areas in upper Suisun Bay and Montezuma Slough (mainly during March to mid-June)". (WRINT-USFWS-11, p.4) The evidence submitted by Dr. Peter Moyle led him to recommend flows "sufficient to keep bottom salinities at Roe Island at 2 ppt or less." (WRINT-NHI-9, p.16) In addressing possible relaxations of this standard in dry and critical years, Dr. Moyle emphasized that this standard should still be sufficient "to move pelagic eggs and larvae of striped bass, delta smelt and longfin smelt to suitable nursery areas in upper Suisun Bay." (WRINT-NHI-9, p.17)

EPA recognizes that these standards should be adjusted to reflect the appropriate historical conditions and the natural variability in runoff and precipitation. Most of the recommendations developed by the USFWS, DFG, the Natural Heritage Institute (NHI), SFEP and others are based on evidence of the habitat needs of various species for a period of several months. When this evidence is developed into a standard expressed as a daily or monthly mean, the water supply impacts can be significant because natural variability (e.g., a dry month in an otherwise wet spring) may make it difficult to meet the standard consistently over short time periods. We recommend, therefore, that the Board also consider other approaches to defining and measuring the standard that would give water managers more flexibility in meeting the standards. For example, EPA has been exploring the possibility of including a salinity isohaline expressed as a number of days of compliance during the February to June period, rather than a monthly or five-month mean. This approach would more clearly reflect the historical pattern of salinity intrusion in the estuary, and may give water managers more flexibility in allocating supplies. EPA is willing to work with the Board and other parties to evaluate the benefits of these and other approaches to reducing the water supply impacts of the standards while ensuring that designated uses are protected.

Although EPA is not presently recommending it, we believe that the Board should also give serious consideration to the benefits of adopting a 2 ppt salinity isohaline below Sherman Island from July through November. This standard would address the concern raised by DFG, the California Department of Water Resources, and the U.S. Bureau of Reclamation and others that habitat conditions for striped bass, Delta smelt, and other species must be maintained out of the lower San Joaquin River in the late summer and fall.

II. Fish Spawning Standard on Lower San Joaquin River

The Standard

EPA recommends that the State adopt a standard of 0.44 mmhos/cm EC from Jersey Point to Vernalis during the spawning season for striped bass.

Background

In our September 3, 1991 letter, EPA disapproved the State's water quality standards for the estuary in part because they were not adequate to protect the designated Fish Spawning use in the lower San Joaquin River. The absence of salinity standards in this reach effectively establishes a barrier to adult migration and spawning further upstream on the San Joaquin River. Based on the evidence submitted previously to the Board by USFWS and DFG (WQCP-USFWS-5; WQCP-DFG-4), EPA has recommended that the Board adopt a standard of 0.44 mmhos/cm EC from Jersey Point to Vernalis.

There was no evidence submitted to the Board during the recent Interim Standards hearing that questioned the scientific basis for these recommendations. DFG noted, moreover, that because of the depleted population, spawning striped bass should be protected by "more stringent" salinity standards on the lower San Joaquin (WRINT-DFG-2 p. 10).

Therefore, we urge the Board, at a minimum, to adopt a standard of 0.44 mmhos/cm EC at six stations from Jersey Point to Vernalis to meet the requirements of the Clean Water Act. Our tentative analysis suggests that water costs of implementing this standard could be reduced by applying the standard only in every third year, to reflect the reproductive biology of striped bass. However, in evaluating the costs of compliance with this standard, the Board should also keep in mind that this standard is likely also to protect outmigration of salmon smolts from the San Joaquin and to protect other species. Accordingly, the Board should consider the cumulative effects of this standard on the entire habitat before adopting any relaxation provisions.

Finally, as we noted in our September 3, 1991 disapproval letter, we understand that some biologists are concerned that extending the spawning reach to its scientifically justified level may expose more fish eggs and larvae to entrainment at the export pumps. We believe that the Board should implement this standard in concert with its measures to reduce those entrainment losses.

III. Salmon Smolt Survival Index Standard

The Standard

EPA recommends that the Board adopt the following salmon smolt survival indices by water year type:

| Sacramento River | | San Joaquin River | |
|------------------|-----|-------------------|-----|
| Wet | .48 | Wet | .46 |
| Above Normal | .40 | Above Normal | .30 |
| Below Normal | .38 | Below Normal | .26 |
| Dry | .32 | Dry | .23 |
| Critical | .29 | Critical | .20 |

These survival indices represent the percentage of salmon smolts surviving passage through the estuary each year.

Background

In our September 3, 1991 disapproval letter, EPA disapproved the State's standards of 68 degrees at Freeport and Vernalis because these standards were not supported by the scientific evidence. EPA remains concerned that the State's temperature standards are too high to protect migrating chinook salmon. Based on the evidence in the record, EPA continues to believe that a 65 degree standard is the best scientifically defensible standard to protect chinook salmon. However, we are continuing to evaluate how such a standard should be set to reflect the natural variability in temperatures in the Delta. As a result, we are not making a specific recommendation at this time, but urge the Board to identify practices that could be used to lower temperatures and could be used to attain the recommended salmon smolt survival standards. Evidence submitted by USFWS (WRINT-USFWS-7) indicates that temperature explains a high degree of the variability in survival in all parts of the Sacramento River Delta. In addition, evidence submitted by USBR (WRINT-USBR-30) indicates there are times that temperatures at Freeport can be lowered during the months of fall-run salmon outmigration through releases from Folsom, Oroville, and Shasta reservoirs.

In the absence of a specific revision to the State's deficient temperature standards, EPA recommends that the Board adopt the smolt survival index described above. This index was developed by the USFWS and used by the Five Agency Salmon Management Group of the Interagency Ecological Studies Program both to evaluate the benefits of protective measures for salmon and to compare the level of protection provided by these measures with survival during various historical conditions. Consistent with the Interagency Statement of Principles, EPA is recommending that the index numbers adopted approximate levels of smolt survival characteristic of the late 1960's to early 1970's. We believe that the adoption of this index as a standard gives the State maximum flexibility to develop combinations of implementation measures which will attain the requisite fisheries resource protection while minimizing adverse impacts to consumptive water uses.

We note that the USFWS recommended an alternative which approximates this goal (Alternative D; WRINT-USFWS-7 and 8). EPA agrees with the USFWS that their recommended implementation measures are generally consistent with this level of protection. Although DFG did not recommend a specific alternative for fall-run salmon protection, DFG Alternative B is identical to the implementation measures recommended by USFWS (WRINT-DFG-8). We believe the Board should give serious consideration to these USFWS and DFG Alternatives in developing implementation plans for fisheries protection.

ADDITIONAL COMMENTS

During the Board's Interim Standards hearings, one of the Board's members asked about regulatory agency discussions with NMFS and/or USFWS about the Federal Endangered Species Act. We would like to clarify EPA's obligations under that Act.

Under Section 7 of the Federal Endangered Species Act (16 U.S.C. Sec.1536), any federal agency that takes an action that may affect threatened or endangered species or their critical habitat must consult with NMFS or USFWS to assure that the Federal action is not likely to jeopardize those species or result in the destruction or adverse modification of critical habitat. As indicated above, EPA is now under an obligation to promptly propose water quality standards replacing those State standards disapproved in our September 3, 1991 letter. A rulemaking effort resulting in the promulgation of water quality standards under Section 303 of the Federal Clean Water Act is a Federal action subject to the Endangered Species Act. Therefore, pursuant to 50 CFR Section 402.13, EPA has initiated informal discussions with both NMFS and USFWS to determine whether adverse impacts are possible and how best to comply with Section 7's consultation requirements in this process.

CONCLUSION

We appreciate the efforts that the Board and its staff are making in dealing with the complicated issues surrounding the Bay/Delta. We look forward to your continued cooperation as we try to resolve the issues raised in our disapproval letter. If you have any questions about our comments, please call me at 415/744-2125, or our Bay/Delta Program Manager Patrick Wright at 415/744-1997.

Sincerely,

A handwritten signature in cursive script, reading "Harry Seraydarian".

Harry Seraydarian
Director
Water Management Division